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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,244	10/07/2004	Ho-Sang Son	CU-3844 RJS	7886

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EXAMINER

CHHABRA, ARUN S

ART UNIT	PAPER NUMBER
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3764

DATE MAILED: 08/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/501,244	SON, HO-SANG	
	Examiner	Art Unit	
	Arun S. Chhabra	3764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/7/2004</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "324" has been used to designate both the couplings and joint members. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites the limitation "the connecting rods" in lines 2-4 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the vibrational speed" in lines 2-3 of the claim. There is insufficient antecedent basis for this limitation in the claim and thus it is unclear what exactly Applicant means by the vibrational speed; if it referring to the frequency of the foot member moving or if there is a separate vibration mechanism involved with the exercise.

Claims 6 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection can be withdrawn if corrected drawing sheets and a specification explanation of the joint members and couplings along the rotational shaft is submitted.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoagland et al. (US Patent Number 4,676,501).

Hoagland discloses an exercise machine having a base seated on a horizontal surface, a post, considered as 103, uprightly provided in front of the base and a foothold comprising pedals 3 and 5 that is vertically moveable on the base and which a user rests their feet on. A drive unit 17 is provided inside of the base and it made up of drive source 19 which is a motor that is mounted on the base. A control section 47 rests on the post and is operated by a user to control the drive of the drive unit.

A rotational shaft 29 extends from opposite sides of the motor 19 and comprises a driving axes, to which eccentric discs 25 and 27 are mounted onto along each side of the rotational shaft. 25 and 27 are considered to be eccentric discs in a broad sense of the term. Eccentric axles are formed from the eccentric discs 25 and 27 and comprise connecting rods 33 which is attached at a point above the connection point between the eccentric disc and rotational shaft.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoagland in view of Escher (US Patent Number 4,703,928).

Hoagland discloses an exercise machine having a base seated on a horizontal surface, a post, considered as 103, uprightly provided in front of the base and a foothold comprising pedals 3 and 5 that is vertically moveable on the base and which a user

rests their feet on. A drive unit 17 is provided inside of the base and it made up of drive source 19 which is a motor that is mounted on the base. A control section 47 rests on the post and is operated by a user to control the drive of the drive unit.

The drive unit also comprises rotational shafts at 29 which extend all the way out to 25 and 27 on either side of 29. The rotational shafts are connected to the driving axes and form eccentric axles that are formed on each side of the rotational shafts.

Connecting rods 33 and 33a comprise each eccentric axle as they are connected to the rotational shaft at 25 and 27. As described in column 2, lines 53-60, each connecting rod is secured to a fastening means 35 which is secured to each end of the foothold in order to provide periodic seesaw movements to the foothold as the rotation of each connecting rod 33 and 33a has a 180 degree phase difference between so that when one eccentric axle is at an uppermost position the other eccentric axle will be at the lowermost position.

Thus, Hoagland discloses the claimed invention except for the balance weights. Escher teaches that it is known to use balance weights on a shaft as set forth by reference number 37 and in column 14, lines 9-20 to provide a static balance between two sides of the apparatus. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the exercise device as taught by Hoagland, to incorporate balance weights as taught by Escher and have those balance weights be on both sides of the rod, since such a modification would provide the exercise device with a static balance amongst the entire apparatus and would thus provide a balance between different forces acting upon the device.

In regards to claim 4, Hoagland discloses the claimed invention but does not disclose expressly the size of the eccentric axle or the rotational speed of the connecting rod. It would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the diameter of the axle and rotational speed of the rod as taught by Hoagland with the diameter and speed of Applicant, because Applicant has not disclosed that having the axle at that diameter and having the rod rotate at that particular speed range provides an advantage, is used for a particular purpose, or solve a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a different sized axle or rotational speed as taught by Hoagland. Thus it appears to be an arbitrary design consideration which fails to patentably distinguish over Hoagland.

Therefore, it would have been an obvious matter of design choice to modify Hoagland to obtain the invention as specified in the claim(s).

Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoagland in view of Stipan (US Patent Number 6,663,498) and further in view of Melby (US Patent Number 4,705,028).

Hoagland discloses an exercise machine having a base seated on a horizontal surface, a post, considered as 103, uprightly provided in front of the base and a foothold comprising pedals 3 and 5 that is vertically moveable on the base and which a user rests their feet on. A drive unit 17 is provided inside of the base and it made up of drive source 19 which is a motor that is mounted on the base. A control section 47 rests on the post and is operated by a user to control the drive of the drive unit.

The drive unit has rotational shafts 29 connected to the driving axes which extend from the opposite sides of the motor. Housings 25 and 27 are located on each side of the rotational shaft and are connected by nut and bolt screws as shown in figure 3 to tie rods 33. The tie rods extend between the housing and foothold connection parts 35 and are attached to both via nut and bolt screws as shown in Figure 3. The tie rods are secured to left and right brackets 37 and 37A that connect to each of the footholds so as to impart periodic seesaw movements to the foothold.

Thus, Hoagland discloses the claimed invention except for the eccentric cams and bearings.

Stipan teaches that it is known to use bearings as set forth in column 4, lines 36-60. Stipan does not explicitly state why the bearings are used, but it appears that they are used to provide a stabilization of forces along the rod. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the exercise device as taught by Hoagland, with bearings inside the housings 25 and 27 as taught by Stipan, since such a modification would provide the exercise device with bearings for providing a balance of forces along the rod or shaft.

Melby teaches that it is known to use cams as set forth by reference number 10. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the exercise device as taught by Hoagland, to incorporate cams within the housings 25 and 27 as taught by Melby, since such a modification would provide the exercise device with cams for providing the seesaw movement of the foothold.

Both the cams and bearings can be placed in housings 25 and 27 which would house cams to attach to and move the connecting rod accordingly.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoagland in view of Stipan and Melby as applied to claim 9 above, and further in view of Smith Jr. (US Patent Number 3,911,907).

Hoagland discloses the claimed invention except for the securing holes. Smith Jr. teaches that it is known to use securing holes as set forth by reference number 74 and in column 3, lines 10-25 to provide different places along the bracket to which a rod can be attached. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the exercise device of Hoagland, with securing holes along the bracket 37 of Hoagland as taught by the securing holes along the bracket 74 of Smith Jr., since such a modification would provide the exercise device with securing holes along the bracket so that the connecting rod could attach at different points along the bracket, similar to how drive rod 72 of Smith Jr. can attach along different points of bracket 74.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoagland et al.

Hoagland discloses the claimed invention but does not disclose expressly the size of the eccentric axle or the rotational speed of the connecting rod. It would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the diameter of the axle and rotational speed of the rod as taught by Hoagland with the diameter and speed of Applicant, because Applicant has not disclosed that having the

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axle at that diameter and having the rod rotate at that particular speed range provides an advantage, is used for a particular purpose, or solve a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a different sized axle or rotational speed as taught by Hoagland. Thus it appears to be an arbitrary design consideration which fails to patentably distinguish over Hoagland.


Therefore, it would have been an obvious matter of design choice to modify Hoagland to obtain the invention as specified in the claim(s).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arun S. Chhabra whose telephone number is 571-272-7330. The examiner can normally be reached on M-F 9:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on 571-272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


STEPHEN R. CROW
PRIMARY EXAMINER
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